



Wide Area Dispatch Solution Eases Power Line Maintenance



MOTOTRBO Simplifies Management of Multiple Service Teams

The Czech Republic's largest electricity and heat producer, CEZ, has deployed a specialised dispatch communication system running on the MOTOTRBO digital radio infrastructure to co-ordinate mobile maintenance teams across an area spanning 60 000 square kilometres. The solution, IP-DCS 250, enables teams to be dispatched quickly and simultaneously in the event of power failures and has vastly improved the organisation of scheduled maintenance on the power network.

With around 27 000 employees, CEZ operates in Poland, Hungary, Slovakia, Romania, Bulgaria and Turkey. The company needed a flexible and reliable solution that would enable it to manage the dispatch of service teams across the entire power distribution area in the Czech Republic. It has numerous Regional Dispatch Centres which comprise several service stations and mobile field teams. Each team member needs access to the radio network for communication with dispatchers and other users.

Designed by Motorola Application Partner Konektel a.s., IP-DCS 250 consists of portable and mobile radio terminals for field personnel, regional and area dispatch consoles for service team managers and workflow specialists and a radio network based on the MOTOTRBO digital platform. The network is connected via radio gateways to CEZ's regional dispatch centres.

It currently operates approximately 120 MOTOTRBO DR3000 repeaters and 1550 DM3600 and DP3600 subscriber display radios and provides a high level of reliability and ease of use. The system also has fully redundant back up and coverage is designed to enable neighbouring sites to compensate in the event of a radio site failure.

The IP-DCS 250's regional dispatch consoles provide connections to the radio terminals, PBX, PSTN and GSM networks. Each console can handle different types of calls simultaneously and has pre-programmed keys for direct dialing of important contact numbers such as emergency services and supervisors.

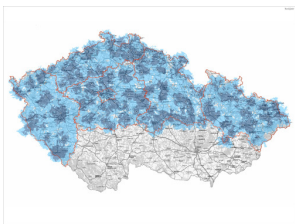
Industry name
Utilities

Solution Features

- 120 DR3000
- 1550 DM3600 / DP3600
- VoIP Telephony between Consoles
- Voice logging
- Consoles with pre-defined messages
- Radios gateways

Benefits

- Voice connection to dispatcher, servicemen and telephone subscribers (private and public)
- 1 radio network through distribution area
- Increased efficiency
- Quicker team dispatch in emergency situations
- High reliability
- Reduced loss of revenue due to power failures



System coverage (blue) - Map of the Czech Republic

“In the past, each region had its own independent radio network, which prevented the consolidation of communication throughout the distribution area. This meant we weren’t able to dispatch maintenance teams efficiently, particularly in the event of wide area power outages. The new digital radio infrastructure provides a common network for coordinating maintenance and service teams throughout the region, thereby reducing the loss of revenue due to power failures.”

Milan Kuchařík, CEZ's Power Network and Control Division

“Each MOTOTRBO radio terminal has a unique ID number which differentiates between mobile and portable radio terminals. The minute a radio is switched on, it is registered on the network and the dispatcher can see exactly where a radio user is located and whether they’re available. This significantly improves the efficiency of dispatch and service teams in the field, making it easier to control multiple work groups across a vast area,”

Vaclav Blaha, Business Director, Konektel a.s.

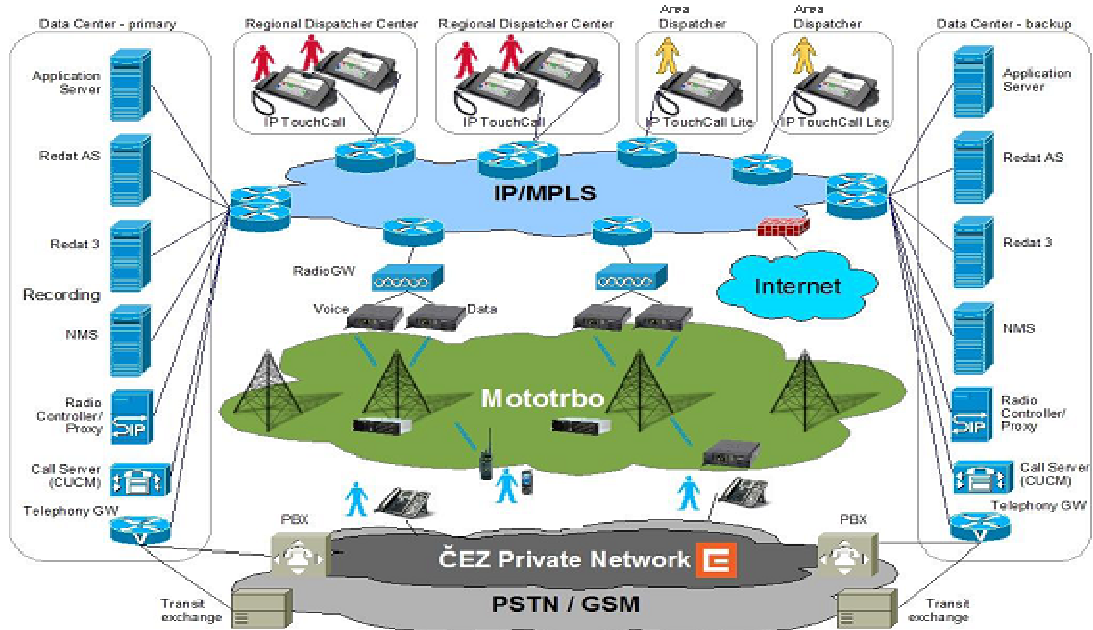
Up to 250 repeaters, 2000 subscriber radios and an unlimited number of dispatch consoles can be combined, enabling group calls, individual calls, dispatcher activated telephone interconnect and radio check across a large area. Voice recording, call logging, automatic vehicle location and text messaging can also be integrated into the system on demand.

Cost-effective Centralised Communication Improves Efficiency

MOTOTRBO’s use of Time-Division Multiple Access technology doubles the number of users who can be supported on an existing licensed 12.5 kHz channel, reducing equipment costs and allowing voice and data communication to be transmitted in two time slots simultaneously.

At present, CEZ is using both time slots for voice communication, but future plans include using the second time slot for transferring data from remote terminal units in the field to the control centre. This will enable the remote measurement and control of power distribution and facilitate the monitoring of power quality, highlighting potential problem areas before outages occur.

Konektel’s IP-DCS 250 radio dispatching solution based on the MOTOTRBO infrastructure is also ideally suited to oil and gas operations, transportation and ambulance services where communications are typically dispatch-based and coverage is required across a large area.



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